

REMARKS

On page 2 of the final Action, claims 1, 2 and 6 were rejected under 35 U.S.C. 102(e) as being anticipated by Sato et al.

In view of the rejection, claim 3 has been canceled, and the subject matter of canceled claim 3 has been incorporated into claim 1. Therefore, the above rejection is obviated.

On page 2 of the Action, claims 1-6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. '662.

In the Action, it was held that "The Liang patent discloses the claimed electrodeionization, wherein the water from the outlet of the diluting compartment is fed to the inlet of a concentrating compartment (see figures 1 and 2)."

In the embodiment as shown in Fig. 1 of Liang et al. '662, water is fed to an ion-depletion compartment 10 and an ion-concentrating compartment 20 in a first stage, and water from the ion-depletion compartment 10 is fed to a depletion compartment 30 and a concentrating compartment 40 in a second stage. The product or treated water is obtained from the depletion compartment 30.

In the embodiment as shown in Fig. 2 of Liang et al. '662, in the first stage, cation exchange material 250 and anion exchange material 260 are arranged adjacent to the ion-concentration compartment 220, and water is fed to the anion exchange material 260 through the cation exchange material 250. The treated water is then fed to a depletion compartment 230 and concentration compartment 240.

In the above embodiments, water to be treated is simply fed from the first stage to the second stage, and the treated water from the second stage is the product.

In claim 1 of the invention, the concentrating compartments and the desalting compartments are formed between the anolyte compartment and the catholyte compartment by arranging alternately

at least one anion-exchange membrane and at least one cation-exchange membrane.

In this structure, in the invention, the outlets of the desalting compartments are connected to the concentrated water introducing device to introduce a part of the deionized water containing at least one of silica and boron at a lower concentration than the raw water and obtained from the desalting compartments into the concentrating compartments at a side near the outlets for the deionized water of the desalting compartments. As a result, silica and boron ions are removed at high rate, as explained at paragraph 0026 of the specification.

Liang et al. '662 does not disclose or even suggest the arrangement of the concentrating compartments and desalting compartments in the single-pass counter-flow manner, nor that a part of the deionized water obtained from the desalting compartments is fed to the concentrating compartments. Therefore, claim 1 is not obvious from Liang et al. '662.

On page 3 of the final Action, claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. '662 in view of Liang et al. '422.

Liang et al. '422 was cited to show the use of tie rod as conventional in the assembly of electrodeionization cells. In Liang et al. '422, the tie rod is used to assemble the cells. However, Liang et al. '422 does not disclose the deficiency of Liang et al. '662, i.e. a part of the deionized water obtained from the desalting compartments is fed to the concentrating compartments. Therefore, claim 7 depending from claim 1 is not obvious from Liang et al. '662 in view of Liang et al. '422.

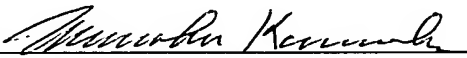
As explained above, claim 1 and its dependent claims are patentable over the cited references.

Reconsideration and allowance are earnestly solicited.

Serial No. 10/791,829

One month extension of time is hereby requested. A credit card authorization form in the amount \$120.00 is attached herewith for the one month extension of time.

Respectfully Submitted,

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